

Amendment to the Claims:

This listing of the claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1 (Currently amended). A method of forming an electronic lens, comprising the steps of:

providing a single patterned mask;

providing a liquid crystal layer of homogeneous liquid crystal droplet (LC) sizes;

simultaneously forming a lens with a layer of inhomogeneous liquid crystal droplet(LC) sizes using the single patterned mask once, the liquid crystal droplet sizes varying according to the patterned mask;

passing a beam of light through the layer; and

tuning a refractive index profile of the light beam passing through the lens with a source of voltage, wherein the electronic lens is formed.

Claim 2 (Currently amended) The method of claim 1, wherein the step of simultaneously forming the lens includes the step of:

forming a negative lens.

Claim 3 (Currently amended). The method of claim 2, wherein the step of forming the negative lens includes the step of: applying the single patterned mask to produce corresponding sizes of the LC droplets which gradually decrease from a center area of the layer to side edges of the layer.

Claim 4 (Currently amended). The method of claim 1, wherein the step of simultaneously forming the lens includes the step of:

forming a positive lens.

Claim 5 (Currently amended). The method of claim 4, wherein the step of forming the positive lens includes the step of: applying the single patterned mask to produce corresponding sizes of the LC droplets which gradually increase from a center area of the layer to side edges of the layer.

Claim 6 (Currently amended). The method of claim 1, wherein the step of tuning, includes step of:

applying a uniform voltage to the layer of the LC droplets for the tuning of the refractive index profile of the lens according to a level of the uniform voltage.

Claim 7 (Cancelled).

Claim 8 (Original). The method of claim 1, further comprising the step of:

forming an array of the lens for broadband beam steering.

Claim 9 (Currently amended). The method of claim 1, further comprising the step of:

forming a Fresnel lens, wherein said single patterned mask is by using a circular zoned patterned mask.

Claim 10 (Original). The method of claim 1, further comprising the step of:

forming a prism from the lens.

Claim 11 (Original). The method of claim 10, wherein the step of forming the prism includes the step of:

forming a switchable prism by splitting a middle pixel.

Claim 12 (Original). The method of claim 10, further comprising the step of:

forming an optical phased array of prisms for broadband beam steering.

Claim 13 (Original). The method of claim 1, further comprising the step of:

focusing at least one eyeglass lens.

Claim 14 (Original). The method of claim 1, further comprising the step of:
focusing a zoom lens on a camera.

Claim 15 (Currently amended). A method of fabricating an inhomogeneous layer of liquid crystal(LC) droplets, comprising the steps of:
forming a single patterned photo mask;
positioning a liquid crystal(LC) layer on one side of the single patterned photo mask ~~mask~~_{substrates};
applying Ultra-Violet(UV) light to a second side of the single patterned photo mask; and
forming an inhomogeneous layer of liquid crystal (LC) droplets with the applied ultraviolet light, wherein sizes of the liquid crystal droplets correspond to the single patterned photo mask.

Claim 16 (Currently amended) The method of fabricating of claim 15, further comprising the step of:
forming a lens with the single patterned photo mask. ~~photomask~~.

Claim 17 (Original). The method of fabricating of claim 16, wherein the step of forming the lens includes the step of: forming a negative lens.

Claim 18 (Original). The method of fabricating of claim 16, wherein the step of forming the lens includes the step of: forming a positive lens.

Claim 19 (Currently amended). The method of fabricating of claim 15, further comprising the step of:

forming a prism with the single patterned photo mask. ~~photomask~~.

Claim 20 (Cancelled).

Claim 21 (Original). The method of fabricating of claim 15, further comprising the step of:

forming a Fresnel lens.

Claim 22 (Original). The method of fabricating of claim 21, wherein the step of forming the fresnal lens includes the step of:

forming the Fresnel lens with a circular zoned patterned mask.

Claim 23 (Currently amended) The method of fabricating of claim 15, wherein the step of positioning supporting, includes the step of: positioning a supporting polymer dispersed liquid crystal layer.

Claim 24 (Original). The method of fabricating of claim 23, wherein the step of forming the lens includes the step of: forming nano-scale size droplets in the polymer dispersed liquid crystal layer.

Claim 25-38 (Cancelled).